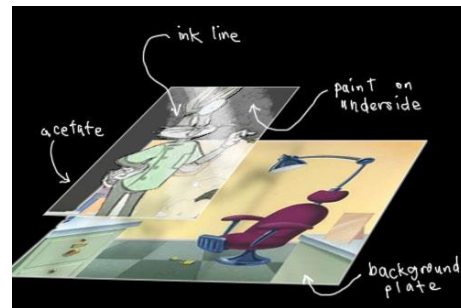
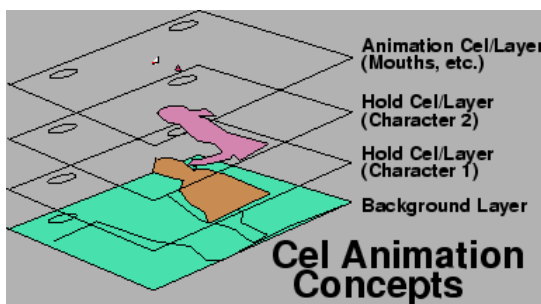


History of Animation

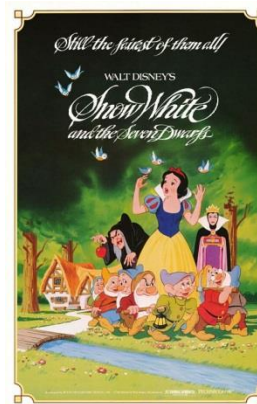
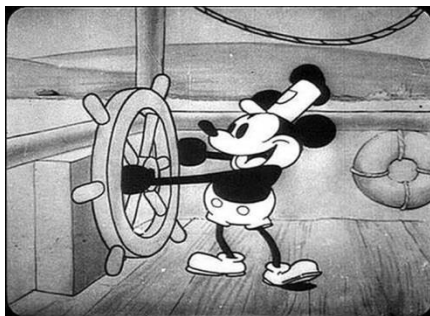
Animation is a graphic representation of drawings to show movement within those drawings. A series of drawings are linked together and usually photographed by a camera. The drawings have been slightly changed between individualized frames so when they are played back in rapid succession (24 frames per second) there appears to be seamless movement within the drawings.

Pioneers of animation include Winsor McCay of the United States and Emile Cohl and Georges Melies of France. Some consider McCay's *Sinking of the Lusitania* from 1918 as the first animated feature film.

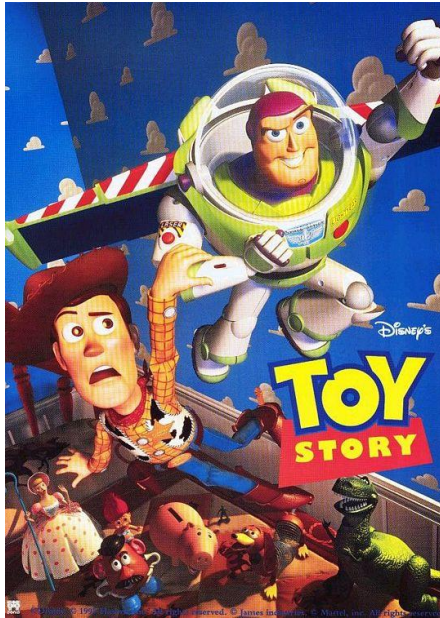
Early animations, which started appearing before 1910, consisted of simple drawings photographed one at a time. It was extremely labor intensive as there were literally hundreds of drawings per minute of film. The development of celluloid around 1913 quickly made animation easier to manage. Instead of numerous drawings, the animator now could make a complex background and/or foreground and sandwich moving characters in between several other pieces of celluloid, which is transparent except for where drawings are painted on it. This made it unnecessary to repeatedly draw the background as it remained static and only the characters moved. It also created an illusion of depth, especially if foreground elements were placed in the frames.



Walt Disney took animation to a new level. He was the first animator to add sound to his movie cartoons with the premiere of *Steamboat Willie* in 1928. In 1937, he produced the first full length animated feature film, *Snow White and the Seven Dwarfs*.



With the introduction of computers, animation took on a whole new meaning. Many feature films of today had animation incorporated into them for special effects. A film like Star Wars by George Lucas would rely heavily on computer animation for many of its special effects. Toy Story, produced by Walt Disney Productions and Pixar Animation Studios, became the first full length feature film animated entirely on computers when it was released in 1995.



With the advent of personal computers, it has now become possible for the average person to create animations.

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Types of Animation

Animation has certainly come a long way [in the decades](#) since its debut in the early 1900s. The techniques used by animators to bring characters and stories to life have improved immeasurably over the years, yet there remains only three primary types of animation: traditional, stop-motion, and computer.

The differences between the three major forms of animation are significant, and covered in the following article:

Traditional Animation

Arriving on the scene at roughly the same time as its live-action counterparts, traditionally animated films have certainly come a long way since the early days of crude drawings and experimental narratives. Traditional animation made its debut in 1906 with a short film featuring different facial expressions. The genre allows for the illusion of animated movement due to the frame-by-frame manipulation of drawings and illustrations. Although computer technology has assisted animators in their efforts over the years, the basic means by which an animated film comes to life has essentially remained the same.

The popularization of the cel-animation process in the early '20s proved instrumental in the genre's meteoric rise to infamy, with the technique ensuring that animators no longer had to draw the same image over and over again – as see-through “cels” containing a character or object in motion could be laid on top of a stationary background. The release of *Snow White and the Seven Dwarfs* in 1937 marked the first time that traditionally animated films began to be taken seriously by the Hollywood community and audiences alike.

In the years since, traditionally animated films have remained popular at cinemas the world over – with the wild success of the genre affording filmmakers the opportunity to break out of the mold from time to time (ie 1972's *Fritz the Cat* became the first animated feature to land an “X” rating). Disney's domination over the 2D animated realm has ensured that their name has become synonymous with animated films, although it's certainly worth noting that some of the most popular cartoons from the last couple of decades have come from other studios (including *The Rugrats Movie*, *Beavis and Butt-head Do America*, and the *Land Before Time* series).

Stop-Motion Animation

Far less prevalent, on the other hand, is stop-motion animation. Stop-motion actually predates traditional, hand-drawn animation: The first attempt, *The Humpty Dumpty Circus*, was released

in 1898. But stop-motion animated features have never quite managed to garner the acclaim and widespread appeal of their 2D counterparts. There's little doubt that the biggest hindrance to stop-motion animation's success is its time consuming nature, as animators must move an object one frame at a time to mimic movement. Considering movies generally contain 24 frames per second, it can take hours to capture just a few seconds worth of footage.

Although the first full-length stop-motion cartoon was released in 1926 (Germany's *The Adventures of Prince Achmed*), the genre's widest exposure came in the 1950s with the release of the *Gumby* television series. After that point, stop-motion animation started to be seen less as a gimmicky fad and more as a viable alternative to hand-drawn animation – with 1965's *Willy McBean and his Magic Machine*, produced by legendary stop-motion duo Arthur Rankin and Jules Bass, the first full-length stop-motion film to be produced within the United States.

The prominence of Rankin/Bass Christmas specials in the '60s and '70s only added to stop-motion animation's growing popularity, yet it was the increased use of stop-motion within special effects field that cemented its place as an invaluable resource – with George Lucas' pioneering work in both the *Star Wars* films and in his effects company Industrial Light and Magic setting a standard that the rest of the industry struggled to match.

Stop-motion has, as of late, lost a lot of its luster in the wake of computer animation's meteoric rise, yet the genre has seen something of a resurgence in the past few years – with the popularity of movies like *Coraline* and *Fantastic Mr. Fox* ensuring that stop-motion will likely continue to endure in the years to come.

Computer Animation

Before it became a pervasive, all-encompassing force within the cinematic community, computer animation was primarily used as a tool by filmmakers to enhance their traditionally-conceived special effects work. As such, computer-generated imagery was used sparingly in the '70s and '80s – with 1982's *Tron* marking the first time it was used on an extensive basis within a full-length feature.

Computer animation received a substantial boost in 1986 with the release of Pixar's first short, *Luxo Jr.* – which went on to receive a nomination for Best Animated Short Film and proved that computers could provide more than just behind-the-scenes special effects support. The increased sophistication of both hardware and software was reflected in the progressively eye-popping nature of computer-generated imagery, with 1991's *Terminator 2: Judgment Day* and 1993's *Jurassic Park* standing as landmark examples of what computers were capable of.

It wasn't until Pixar released the world's first computer-animated feature in 1995, [Toy Story](#), that audiences and executives alike first began to see the possibilities offered by the technology, and it wasn't long before other studios began clamoring to get into the CGI game. The three dimensional appearance of computer-generated cartoons instantly assured their success over their 2-D counterparts, as viewers found themselves transfixed by the novelty of the lifelike images and jaw-dropping visuals.

And although Pixar remains the undisputed champion of the computer-generated landscape, there have certainly been plenty of equally successful examples of the genre in recent years – with, for instance, the [Shrek](#) series raking in well over two billion dollars worldwide. It's also impossible to downplay the significance of [Avatar's](#) incredible, chart-topping success. The movie - which boasts some of the most impressive computer-animated visuals to date - will likely set a new standard that future CGI-heavy films will struggle to match.

Animation: Definitions & Terminology

The heart, the hand and the soul of Animation comes from the great animators who "breathe" life into a character with a simple pencil...this is, essentially, the Art of Animation.

The process itself occurs when a pencil drawing, full of expression and life, is transferred to a sheet of clear plastic, (or celluloid-cel for short) which is then colored in by a "painter." When dry, the cels are placed on a hand-painted background and photographed one at a time to create the individual frames of the animated short or full-length feature.

CEL: A broad term that encompasses most types of animation art. In its strictest interpretation, a cel is the plastic sheet, either cellulose acetate or cellulose nitrate, that animated characters are painted on. In practice, the term cel has come to mean that plastic sheet in combination with the outline and coloring of a character, object, and/or special effect. Outlines can be either hand-inked or Xerographically transferred to the sheet of plastic. Those outlines are then filled with color, either by hand-painting or a serigraphic process, to complete the cel.

12 or 16 Field: These terms are used to describe the size of a particular cel. They come from the size of the "field" of view of the camera photographing the artwork. For rough use, consider a twelve-field cel roughly 10"x12", and a sixteen-field cel approximately 14"x16". The actual framed size may differ.

Original production cel: These are the cels actually used in the production of a cartoon. They can have either Xerographed or hand-inked outlines, and are hand-painted at the studio. These cels are one-of-a-kind pieces of art, and their rarity makes them highly sought after by collectors. Because these cels were created to make an actual cartoon, each cel is a component part of a larger movement. Different cels from the same scene may be more or less desirable depending on a variety of factors: size, profile and expression of the character, any damage to inking or paint, and overall visual appeal.

Limited edition cel: As with production cels, limiteds can have either hand-inked or xerographic outlines, and are also hand-painted. The major difference, as its name implies, is that the limited editions are created in limited quantities, generally in runs of 250 to 500 cels. Because of these small edition sizes, limiteds can also be very collectible. Some limiteds are exact reproductions of the frames of the film they represent. Others are based on contemporary interpretations of classic characters or scenes by their animators- Chuck Jones limited, for instance. Limited editions are always hand-numbered on the cel, and many are signed by the artists.

Sericels: Sometimes called serigraph cels. The serigraphy process involves silk-screening each individual color to the cel, one at a time. Every distinct shade is a separate screen, and a separate pass in the procedure. As a result of this fine art operation, each color is flawlessly reproduced. Sericels are also created in limited quantities, typically 2500 to 5000 pieces. Because of their larger edition size, sericels are the most affordable type of animation art, ideal for the beginning collector.

Publicity Cel: A cel, usually hand-painted, not actually used in a film or created for collectors, but made for publicity or promotional purposes.

Cel Set-up: A combination of cels presented together. If the combination of cels match exactly, it is referred to as a *key set-up*.

Animation Drawing: These are the original, one-of-a-kind drawings, penciled by the animator, that cels are eventually made from. Drawings can be rough, or the more refined CLEAN-UP drawings. Sometimes, set-ups are available with matching drawings and the cel that was made from it.

Storyboard drawing: A drawing or story sketch made for the storyboard, which conveys visually the plot and action of a scene or shot. The storyboard serves as a preliminary guide for the artists.

Model sheets: Drawings, or studio reproductions of a character in a variety of actions used as reference by the animators during production.

Backgrounds:

Original production background: This covers a wide range of backgrounds that are original paintings, and were used in the production of a cartoon. It is important to note that it does not necessarily mean it is the same production that the cel is from. It may not even be from the same studio as the cel. If you see this term used, you will want to know what production the background is from.

Key master set-up: This is the ultimate set-up, and the most rare. A key master set-up combines the original cel, or a key set-up of cels, with the background they were originally photographed over. When framed, this will look exactly as it did in the actual film or short.

Presentation or hand-painted background: This type of background was specially prepared to complement the cel by an independent artist. Generally, it will be in the style of the original. Although it may enhance the visual appeal of the set-up, it adds little value or collectibility to the cel (unless the artist is famous in his or her own right).

Reproduction background: This is the most common type of background. It is, as the name implies, a copy of a background. The reproduction can be by color Xerox, lithography, serigraphy or photography. In many cases, it is a reproduction of the original background.

Lithographs/lithography: Lithography owes its existence to the chemical principle that oil and water do not mix. The artist draws the image to be printed on a flat slab of limestone, metal, or plastic using a greasy crayon. The surface is then chemically fixed and wet with water, which does not adhere to the greasy image areas. When the surface is inked with a roller, ink adheres only to the greasy areas and not the wet area. Paper is then positioned over the plate and the press is manually operated to produce one impression. The process must be repeated for each color. It is not unusual for fine lithographs to be printed from 15 or more plates.

Stop-motion (Text by Heidi Leigh): Stop-motion animation is a film-making process that utilizes fully animatronic puppets and props to create action in a film. The repeated starting and stopping of a camera allows individual images to be captured frame by frame. Between each shot, the character is moved by animators incrementally, so each frame varies slightly from the last. The resulting images are then compiled in succession, which brings the puppet actors to life. The process is similar to traditional animation, in which thousands of cels are photographed, one at a time, to create the illusion of movement. In both genres, each frame of the finished film is a building block, and a full day's work for a team of animators might accomplish only a minute of footage.

The first step in the film-making process is to imagine the story and its characters. In the case of *The Nightmare Before Christmas*, the story was Tim Burton's brainchild for years before Disney agreed to produce it. Burton's concept sketches of the characters and setting became the heart of the film. The drawings you see at Animazing were inspired by his vision, and established the aesthetics and mood for the entire film. Upon approval, these completed model-drawings were pinned to a bulletin board as reference for the most involved artists, such as Joe Ranft, who then story-boarded the film with elaborately detailed paintings depicting every scene and act. These storyboards served as essential guides for the pre-production and production teams, and were vital tools for everyone, including musicians, writers, voice actors, set designers, puppet makers, and the crew.

After the puppets and sets are completed, the filming begins and the stop-motion animators spend their days physically manipulating the 3-dimensional puppets and models, a little bit at a time. Production on *Nightmare* lasted more than two years. 227 puppets were constructed to represent the characters in the movie; Jack Skellington alone had around 400 heads, which enabled his every possible emotion to be expressed!

A portion of the artwork in *The Art of Stop-Motion* exhibition came from the personal collection of Henry Selick, a Stop-Motion director, producer and writer with an extensive career. Selick wrote and directed *Coraline*, and directed Tim Burton's *The Nightmare Before Christmas*.

Others pieces from the exhibition came from the collection of the late Joe Ranft, one of the top animation artists of recent years. His artistry and imagination can be admired via movies such as *The Nightmare Before Christmas*, *The Little Mermaid*, *Beauty and the Beast*, *Lion King*, *Toy Story*, *Monsters Inc.*, and *Corpse Bride*, which was dedicated to him by Tim Burton.

John Canemaker, a Disney Historian and NYU Professor of Animation, wrote a book entitled *The Two Joes*, which is set to be released in August of 2010. It is about the lives and artistic careers of two legendary animation artists, Joe Ranft and Joe Grant. The author will attend a book-signing event in September of 2010 at Animazing Gallery. Some of the storyboards from the collection of Joe Ranft, which were acquired by Animazing Gallery, will be published in this highly anticipated book.

Armature: Armature [ahr-muh-cher]– noun: Sculpture. A skeletal framework built as a support on which a clay, wax, or plaster figure is constructed.

Customized professional armatures used in full-scale Stop-Motion films are amazing functional sculptures. Each one is built from the ground up at a cost of tens of thousands of dollars to the studios. These bendable robots become puppets only after a labor-intensive process, managed by skilled artists and engineers who must provide their director with fully animated performers. The finished creations must be capable of singing, dancing, winking, holding a popsicle and biting it, and jumping for joy while their hair blows in the wind!

The studio/laboratory where a precision-engineered Stop-Motion puppet is created requires many unique items. For any artist wishing to build one of these creatures, here is a typical list of must-haves:

A miniature machine shop with lathe, drills, sculpting tools, casting plastic, liquid latex, foam, rubber, paint, hair, fur, hardening clays, rubber masks, make up, polyester resins, air brushes, paint brushes, gadgets, wire, self-skinning polyfoam, joints, nuts, bolts, eyeballs, miniature screws, brass tubing, miniature tools, and of course soldering metal and a tiny flame gun!

Armaverse Armatures, the makers of customizable Creation Kits, have loaned Animazing Gallery some Armature samples. In order to fully understand how durable the puppets' skeletons are, we encourage visitors to handle the robots. They're exactly like the Terminator, except smaller!

The *Corpse Bride* puppets were all used in the film, and are fully animatronic. They were acquired from the Warner Bros. archives.

The Disney props from *The Nightmare Before Christmas* were acquired through a '94 Sotheby's auction.